

REMARKS

Now in the application are Claims 1-36, of which Claims 1, 14, 21, 25, 29, and 33-36 are independent. The above amendment amends Claim 1 and 29 to further define that each recited modeling process is performed in a technical computing environment. Additionally, the above amendment amends Claim 35 to correct a typographical error. No new matter is added and no new issues are raised and therefore, no further search is required. The following comments address all stated grounds of rejection, and place the presently pending claims as identified above, in condition for allowance.

CLAIMS REJECTIONS UNDER 35 U.S.C. § 101

Claims 1-36 stand rejected under 35 U.S.C. § 101 because the limitations reflect non-statutory subject matter involving signal theory with no specific application. Applicants respectfully traverse each of these rejections and contend that each of these claims recite statutory subject matter under 35 U.S.C. § 101.

Claims 1-36 each recite patentable subject matter under 35 U.S.C. § 101. Claims 1-36 relate to modeling processes, for example, the modeling of a dynamic system and therefore have a practical application because they produce useful, concrete and tangible results. More specifically, each of the Applicants claimed inventions transforms data representing discreet data values operated on by blocks representing functional entities into a composite signal representative of an ordered set of the discreet values.

In this manner, when a model or modeling process in accordance with the teachings of the present invention are displayed on a display device the graphical representation of the modeling process is enhanced. The enhanced graphical representation of the model, in turn, simplifies model navigation and signal selection as well as model validation and integration of individual models. Further, use of composite signals reduces memory requirements for graphical representation of the model and model execution. Accordingly, transformation of the discreet signal values into an ordered set represented by a composite signal increases model execution speed and, in turn, improves modeling cycle times, and, if desired, code generation.

In the Office Action, a signal is defined as a form of energy that does not fall within either of the two definitions of manufacturer and thus, a signal does not fall

into one of the four statutory classes of 35 U.S.C. § 101. However, the definition of a signal proffered in the Office Action although accurate does not encompass the signal and signal values recited in Claims 1-36. That is, the definition proffered is well suited for a communications system and not a modeling process. It is well known that the performance of a communication system depends on the received signal energy. For example, higher energy signals are detected more reliably with fewer errors than are lower energy signals. Nevertheless, the instant application teaches that in a block diagram model, signals contained in the signal lines are the streams of values that appear at the output ports of the block of the block diagram model and these signals can have a wide range of attributes, such as name, data type, numeric type, and dimensionality. *See*, page 7, lines 6-14 of the Specification. In other words, the signals and signal values recited in Claims 1-36 are encoded with functional descriptive material and as such create a functional interrelationship with a computing environment in which the model executes. That is, the modeling processes are performed in a computing environment and during execution of the model the blocks representing functional entities operate on the signals and signal values to provide a useful, concrete and tangible result, namely a modeling or simulation of a dynamic real-world system such as electrical circuits, shock absorbers, braking systems and many other electrical, mechanical and thermal dynamic systems. As such, Claims 1-36 each recite statutory subject matter under 35 U.S.C. §101.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claims 1-36 under 35 U.S.C. § 101.

CONCLUSION

In view of the above amendments and remarks, each of the presently pending claims in this application is in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issuance. If, however, the Examiner considers that further obstacles to allowance of these claims persist, we invite a telephone call to Applicant's representative identified below.

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Respectfully submitted,

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